09/937521

SEQUENCE LISTING

<110> Takara Shuzo Co., Ltd.

<120> A gene encoding ceramidase

<130> 00-011-PCT

<140> JP 11/84743

<141> 1999-3-26

<160> 18

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<211> 21

<212> PRT

<213> Mouse

<220>

<222> 7, 9, 13

<223> Xaa is an unknown amino acid.

<400> 1

Phe Ser Gly Tyr Tyr Ile Xaa Val Xaa Arg Ala Asp Xaa Thr Gly

1   5   10   15

Lys Val Asn Asp Ile Asn

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<210> 2

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<211> 10

<212> PRT

<213> Mouse

<220>

<222> 9

<223> Xaa is an unknown amino acid.

<400> 2

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<210> 3

<211> 35

<212> PRT

<213> Mouse

<220>

<222> 29, 30

<223> Xaa is an unknown amino acid.

<400> 3

Gly Tyr Leu Pro Gly Gln Gly Pro Phe Val Asn Gly Phe Ala Ser
1   5   10   15

Ser Asn Leu Gly Asp Val Ser Pro Asn Ile Leu Gly Pro Xaa Xaa
                20   25   30

Val Asn Thr Gly Glu
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<210> 4

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized oligonucleotide for primer.

<220>

<222> 6, 9, 15

<223> "n" is G or A or T or C.

<400> 4

carggnccnt tygtngc   17

<210> 5

<211> 17

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<213> Artificial Sequence

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<223> Synthesized oligonucleotide for primer.

<220>

<222> 3, 6, 15

<223> "n" is G or A or T or C.

<400> 5

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<210> 6

<211> 38

<212> DNA

<213> Mouse

<400> 6

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<223> Synthesized oligonucleotide for primer.

<400> 7

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<210> 8

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09/937521

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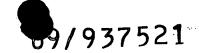

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<400> 11

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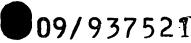
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aagttgacag atattgaaga aaagcttttc tctgtgcaca ttatagagtg aattcacaaa 3060

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 3108

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<211> 2271

<212> DNA

<213> Mouse

<400> 12

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<210> 13

<211> 756

<212> PRT

<213> Mouse

<400> 13

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Leu Leu Val Ile Met Thr Val Ile Thr Val Ala Leu Leu Thr Leu
                20                  25                  30
Leu Phe Val Thr Ser Gly Thr Ile Glu Asn His Lys Asp Ser Gly
                35                  40                  45
Asn His Trp Phe Ser Thr Thr Leu Gly Ser Thr Thr Thr Gln Pro
                50                  55                  60
Pro Pro Ile Thr Gln Thr Pro Asn Phe Pro Ser Phe Arg Asn Phe
                65                  70                  75
Ser Gly Tyr Tyr Ile Gly Val Gly Arg Ala Asp Cys Thr Gly Gln
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```
                    80                  85                  90
Val Ser Asp Ile Asn Leu Met Gly Tyr Gly Lys Asn Gly Gln Asn

                    95                 100                 105
Ala Arg Gly Leu Leu Thr Arg Leu Phe Ser Arg Ala Phe Ile Leu

                   110                 115                 120
Ala Asp Pro Asp Gly Ser Asn Arg Met Ala Phe Val Ser Val Glu

                   125                 130                 135
Leu Cys Met Ile Ser Gln Arg Leu Arg Leu Glu Val Leu Lys Arg

                   140                 145                 150
Leu Glu Ser Lys Tyr Gly Ser Leu Tyr Arg Arg Asp Asn Val Ile

                   155                 160                 165
Leu Ser Ala Ile His Thr His Ser Gly Pro Ala Gly Phe Phe Gln

                   170                 175                 180
Tyr Thr Leu Tyr Ile Leu Ala Ser Glu Gly Phe Ser Asn Arg Thr

                   185                 190                 195
Phe Gln Tyr Ile Val Ser Gly Ile Met Lys Ser Ile Asp Ile Ala

                   200                 205                 210
His Thr Asn Leu Lys Pro Gly Lys Ile Phe Ile Asn Lys Gly Asn

                   215                 220                 225
Val Ala Asn Val Gln Ile Asn Arg Ser Pro Ser Ser Tyr Leu Leu

                   230                 235                 240
Asn Pro Gln Ser Glu Arg Ala Arg Tyr Ser Ser Asn Thr Asp Lys

                   245                 250                 255
Glu Met Leu Val Leu Lys Leu Val Asp Leu Asn Gly Glu Asp Leu

                   260                 265                 270
Gly Leu Ile Ser Trp Phe Ala Ile His Pro Val Ser Met Asn Asn

                   275                 280                 285
Ser Asn His Phe Val Asn Ser Asp Asn Met Gly Tyr Ala Ala Tyr

                   290                 295                 300
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Leu Phe Glu Gln Glu Lys Asn Lys Gly Tyr Leu Pro Gly Gln Gly
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Pro Phe Val Ala Gly Phe Ala Ser Ser Asn Leu Gly Asp Val Ser
              320               325               330
Pro Asn Ile Leu Gly Pro His Cys Val Asn Thr Gly Glu Ser Cys
              335               340               345
Asp Asn Asp Lys Ser Thr Cys Pro Asn Gly Gly Pro Ser Met Cys
              350               355               360
Met Ala Ser Gly Pro Gly Gln Asp Met Phe Glu Ser Thr His Ile
              365               370               375
Ile Gly Arg Ile Ile Tyr Gln Lys Ala Lys Glu Leu Tyr Ala Ser
              380               385               390
Ala Ser Gln Glu Val Thr Gly Pro Val Leu Ala Ala His Gln Trp
              395               400               405
Val Asn Met Thr Asp Val Ser Val Gln Leu Asn Ala Thr His Thr
              410               415               420
Val Lys Thr Cys Lys Pro Ala Leu Gly Tyr Ser Phe Ala Ala Gly
              425               430               435
Thr Ile Asp Gly Val Ser Gly Leu Asn Ile Thr Gln Gly Thr Thr
              440               445               450
Glu Gly Asp Pro Phe Trp Asp Thr Leu Arg Asp Gln Leu Leu Gly
              455               460               465
Lys Pro Ser Glu Glu Ile Val Glu Cys Gln Lys Pro Lys Pro Ile
              470               475               480
Leu Leu His Ser Gly Glu Leu Thr Ile Pro His Pro Trp Gln Pro
              485               490               495
Asp Ile Val Asp Val Gln Ile Val Thr Val Gly Ser Leu Ala Ile
              500               505               510
Ala Ala Ile Pro Gly Glu Leu Thr Thr Met Ser Gly Arg Arg Phe
```

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Arg Glu Ala Ile Lys Lys Glu Phe Ala Leu Tyr Gly Met Lys Asp
            530                   535                   540
Met Thr Val Val Ile Ala Gly Leu Ser Asn Val Tyr Thr His Tyr
            545                   550                   555
Ile Thr Thr Tyr Glu Glu Tyr Gln Ala Gln Arg Tyr Glu Ala Ala
            560                   565                   570
Ser Thr Ile Tyr Gly Pro His Thr Leu Ser Ala Tyr Ile Gln Leu
            575                   580                   585
Phe Arg Asp Leu Ala Lys Ala Ile Ala Thr Asp Thr Val Ala Asn
            590                   595                   600
Met Ser Ser Gly Pro Glu Pro Pro Phe Phe Lys Asn Leu Ile Ala
            605                   610                   615
Ser Leu Ile Pro Asn Ile Ala Asp Arg Ala Pro Ile Gly Lys His
            620                   625                   630
Phe Gly Asp Val Leu Gln Pro Ala Lys Pro Glu Tyr Arg Val Gly
            635                   640                   645
Glu Val Val Glu Val Ile Phe Val Gly Ala Asn Pro Lys Asn Ser
            650                   655                   660
Ala Glu Asn Gln Thr His Gln Thr Phe Leu Thr Val Glu Lys Tyr
            665                   670                   675
Glu Asp Ser Val Ala Asp Trp Gln Ile Met Tyr Asn Asp Ala Ser
            680                   685                   690
Trp Glu Thr Arg Phe Tyr Trp His Lys Gly Ile Leu Gly Leu Ser
            695                   700                   705
Asn Ala Thr Ile Tyr Trp His Ile Pro Asp Thr Ala Tyr Pro Gly
            710                   715                   720
Ile Tyr Arg Ile Arg Tyr Phe Gly His Asn Arg Lys Gln Glu Leu
            725                   730                   735
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Leu Lys Pro Ala Val Ile Leu Ala Phe Glu Gly Ile Ser Ser Pro
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Phe Glu Val Val Thr Thr
              755

<210> 14

<211> 682

<212> PRT

<213> Mouse

<400> 14

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Gln Val Ser Asp Ile Asn Leu Met Gly Tyr Gly Lys Asn Gly Gln
              20   25   30

Asn Ala Arg Gly Leu Leu Thr Arg Leu Phe Ser Arg Ala Phe Ile
              35   40   45

Leu Ala Asp Pro Asp Gly Ser Asn Arg Met Ala Phe Val Ser Val
              50   55   60

Glu Leu Cys Met Ile Ser Gln Arg Leu Arg Leu Glu Val Leu Lys
              65   70   75

Arg Leu Glu Ser Lys Tyr Gly Ser Leu Tyr Arg Arg Asp Asn Val
              80   85   90

Ile Leu Ser Ala Ile His Thr His Ser Gly Pro Ala Gly Phe Phe
              95   100   105

Gln Tyr Thr Leu Tyr Ile Leu Ala Ser Glu Gly Phe Ser Asn Arg
             110   115   120

Thr Phe Gln Tyr Ile Val Ser Gly Ile Met Lys Ser Ile Asp Ile
             125   130   135

Ala His Thr Asn Leu Lys Pro Gly Lys Ile Phe Ile Asn Lys Gly
             140   145   150

Asn Val Ala Asn Val Gln Ile Asn Arg Ser Pro Ser Ser Tyr Leu
             155   160   165

Leu Asn Pro Gln Ser Glu Arg Ala Arg Tyr Ser Ser Asn Thr Asp
             170   175   180

Lys Glu Met Leu Val Leu Lys Leu Val Asp Leu Asn Gly Glu Asp
             185   190   195

Leu Gly Leu Ile Ser Trp Phe Ala Ile His Pro Val Ser Met Asn
             200   205   210

Asn Ser Asn His Phe Val Asn Ser Asp Asn Met Gly Tyr Ala Ala
             215   220   225

Tyr Leu Phe Glu Gln Glu Lys Asn Lys Gly Tyr Leu Pro Gly Gln
             230   235   240

Gly Pro Phe Val Ala Gly Phe Ala Ser Ser Asn Leu Gly Asp Val
             245   250   255

Ser Pro Asn Ile Leu Gly Pro His Cys Val Asn Thr Gly Glu Ser
             260   265   270

Cys Asp Asn Asp Lys Ser Thr Cys Pro Asn Gly Gly Pro Ser Met
             275   280   285

Cys Met Ala Ser Gly Pro Gly Gln Asp Met Phe Glu Ser Thr His
             290   295   300

Ile Ile Gly Arg Ile Ile Tyr Gln Lys Ala Lys Glu Leu Tyr Ala
             305   310   315

Ser Ala Ser Gln Glu Val Thr Gly Pro Val Leu Ala Ala His Gln
             320   325   330

Trp Val Asn Met Thr Asp Val Ser Val Gln Leu Asn Ala Thr His
             335   340   345

Thr Val Lys Thr Cys Lys Pro Ala Leu Gly Tyr Ser Phe Ala Ala

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                    380                 385                 390
        Gly Lys Pro Ser Glu Glu Ile Val Glu Cys Gln Lys Pro Lys Pro
                    395                 400                 405
        Ile Leu Leu His Ser Gly Glu Leu Thr Ile Pro His Pro Trp Gln
                    410                 415                 420
        Pro Asp Ile Val Asp Val Gln Ile Val Thr Val Gly Ser Leu Ala
                    425                 430                 435
        Ile Ala Ala Ile Pro Gly Glu Leu Thr Thr Met Ser Gly Arg Arg
                    440                 445                 450
        Phe Arg Glu Ala Ile Lys Lys Glu Phe Ala Leu Tyr Gly Met Lys
                    455                 460                 465
        Asp Met Thr Val Val Ile Ala Gly Leu Ser Asn Val Tyr Thr His
                    470                 475                 480
        Tyr Ile Thr Thr Tyr Glu Glu Tyr Gln Ala Gln Arg Tyr Glu Ala
                    485                 490                 495
        Ala Ser Thr Ile Tyr Gly Pro His Thr Leu Ser Ala Tyr Ile Gln
                    500                 505                 510
        Leu Phe Arg Asp Leu Ala Lys Ala Ile Ala Thr Asp Thr Val Ala
                    515                 520                 525
        Asn Met Ser Ser Gly Pro Glu Pro Pro Phe Phe Lys Asn Leu Ile
                    530                 535                 540
        Ala Ser Leu Ile Pro Asn Ile Ala Asp Arg Ala Pro Ile Gly Lys
                    545                 550                 555
        His Phe Gly Asp Val Leu Gln Pro Ala Lys Pro Glu Tyr Arg Val
                    560                 565                 570
```

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Gly Glu Val Val Glu Val Ile Phe Val Gly Ala Asn Pro Lys Asn
            575   580   585

Ser Ala Glu Asn Gln Thr His Gln Thr Phe Leu Thr Val Glu Lys
            590   595   600

Tyr Glu Asp Ser Val Ala Asp Trp Gln Ile Met Tyr Asn Asp Ala
            605   610   615

Ser Trp Glu Thr Arg Phe Tyr Trp His Lys Gly Ile Leu Gly Leu
            620   625   630

Ser Asn Ala Thr Ile Tyr Trp His Ile Pro Asp Thr Ala Tyr Pro
            635   640   645

Gly Ile Tyr Arg Ile Arg Tyr Phe Gly His Asn Arg Lys Gln Glu
            650   655   660

Leu Leu Lys Pro Ala Val Ile Leu Ala Phe Glu Gly Ile Ser Ser
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Pro Phe Glu Val Val Thr Thr
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<210> 15

<211> 2049

<212> DNA

<213> Mouse

<400> 15

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gaactatgta tgatttccca acgactgagg ttggaggtcc tgaagagact agagagtaaa 240

tatggctctc tgtatcgaag agacaatgtt atcctgagtg ccattcacac acactctggc 300

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09/937521

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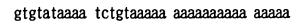
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